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EDITED BY WILLIAM HUNTING, F.R.C.V.S.

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THE DANGER OF RABIES FROM FOXES.

A fortnight ago we reprinted a newspaper report of an inquest upon a Master of Foxhounds, at which the medical opinion was expressed that death was due to hydrophobia. There was a clear history of a bite from a hunted fox, received near the end of last hunting season, and the symptoms of the subsequent fatal illness in September, as reported, certainly read very like those of hydrophobia. Nevertheless, veterinary surgeons and medical men alike would generally regard the diagnosis as open to grave doubt. No case of animal rabies has been established in England since 1902, and it is difficult to believe that the disease can have lingered so long amongst foxes without being transmitted to dogs. Again, it is known that there are acute nervous affections of the human subject—though it is true that such cases are rare—the symptoms of which may closely simulate those of hydrophobia. Taking the report as it stands, it certainly cannot be held to prove the existence of rabies in England.

Facts have since transpired, however, which tend to support the diagnosis of hydrophobia. We hear that a number of foxes have been imported into England, and that some of these were certainly set free in the district in which this alleged case of hydrophobia occurred. This fact puts a different complexion upon the matter. It does not, of course, prove that the diagnosis in this one case was correct. But it opens the door to the possibility of a recent importation of infection amongst foxes in the district in question—along with other districts, and thus considerably weakens the previous grounds for doubting the diagnosis. Upon the whole the probability seems to be that the case was one of hydrophobia.

This reveals a loophole in our existing regulations against rabies. The importation of foxes should certainly be stopped, and we hear that steps are already being taken in this direction. Doubtless, also, some enquiry will be made as to whether the importation of other species of animals, which has hitherto been unchecked and almost unnoticed, may not constitute a possible source of danger. It is clear that for some time to come, veterinary surgeons should remember that local outbreaks of rabies, especially in the country, are at least possible, and they should keep upon the alert. It goes without saying that the district in which this case occurred, and especially its pack of hounds, will be carefully watched.

VETERINARY SCIENCE AND ITS RELATION TO THE COMMUNITY.*

By Dr. O. CHARNOCK BRADLEY.

The name and memory of William Dick, a native of this city, born in White Horse Close, will ever be held in reverence by the profession of which he formed so distinguished an ornament. To his penetrating foresight and indefatigable energy the genesis of this College is due. On his loyal and great-hearted generosity the continuance of the College after his death depended. Eighty-eight years ago Dick might have devoted his energies to the conduct of a private practice and the accumulation of wealth. Fortunately for veterinary science his was a more altruistic character. Instead of working for his own gain merely, he followed the advice of Dr. John Barclay and, in a humble way, laid the foundation of the first veterinary school in Scotland. Of what the germ of his school was like we can form some idea from the words of one who wrote as an eye-witness. "You may fancy to yourself," says the writer, "a room of no very great dimensions in an old and apparently long untenanted house in Clyde Street. You enter it from the street door and are immediately struck with the delightful confusion which seems to reign within. Skeletons of all descriptions, from a horse to an ape, not ranged in regular order "all of a row," but standing higgledy-piggledy, their ranks having been broken by the Professor's table, and their heads looking in all directions, as if thrown together by chance. . . . Of that portion of the house which is set apart for the audience, the best thing I can say is that whenever I dropped in I have always found it remarkably well filled. It is fitted up with rough deal planks, set upon rough props; the seats rising tier above tier until your head touches a very dark-coloured ceiling."

From this modest beginning the College grew, and grew rapidly. Extension after extension was made; elaboration after elaboration became necessary. In the beginning Dick was unassisted; but ultimately he was forced to gather around him a staff of teachers, some of whom later became famous in the veterinary and wider scientific world.

I think that without the slightest exaggeration or distortion of facts we may say that as Dick's College grew, so came into being a veterinary profession in Scotland, and the growth of the two was interdependent. When the veterinary school was first projected a veterinary profession could scarcely be said to exist on this side of the Border. We are told that at that time there were not more than a dozen practitioners in Scotland, with the result that animal owners were almost entirely at the mercy of charlatans and quacks of the most ignorant description. With the dissemination of veterinary knowledge resulting from the establishment of the Clyde Street School properly qualified practitioners became increasingly numerous and of vastly improved training.

* Inaugural Address delivered at the opening of the 89th Session of the Royal (Dick) Veterinary College, Edinburgh, October 4, 1911.

The rule-of-thumb man gradually—unquestionably, very gradually—gave place to him who was equipped to take a more scientific and therefore more commonsense view of the causes and treatment of animal diseases.

When William Dick died in 1866, "in the full tide of successful experiment," he had stamped upon veterinary science so indelible an impression that the good work he had initiated continued, and became ever more and more fruitful.

Veterinary science, not only in Scotland, but in the United Kingdom and throughout the whole civilised world, has benefited by the movement which had its origin in the "old and apparently long untenanted house in Clyde Street." It was said during Dick's lifetime, and has been said since his death, that the Clyde Street School catered for the requirements of Scotland only. This is not, and never has been, according to fact. While Dick was still living 818 students graduated from this College, and of these barely more than half belonged to Scotland. A large proportion came from England and Wales, some from Ireland, and others from the Colonies and from foreign countries. Clearly the Edinburgh Veterinary College in those days was not parochial. What was true from 1823 to 1866 remains true to-day. Into the uttermost parts of the earth, beyond the confines of the seven seas, men have gone forth from the narrow and somewhat gloomy street where for all but ninety years the school has been located. Not long ago it was possible to say that the Principals of all the Veterinary Colleges in the United Kingdom could claim the Clyde Street School as their *alma mater*, as can at the present moment the heads of the schools in London, Glasgow, Dublin, Sydney. Not only in Scotland are graduates of this College practising their profession, but an examination of the official Register of Veterinary Surgeons shows that practitioners trained within these walls are doing their work and maintaining the traditions of the school in every county of England, in every county but one in Wales, and in every county but three in Ireland. They are to be found in nearly all the King's Dominions beyond the seas. They may be met in many of the States of North America, and in South America.

To give a list of famous men who have sat on the benches within this College would be tedious from its length. Let it suffice to say that former students have occupied and are occupying the most exalted positions in their profession. Almost as tedious would it be to recount the names of famous men who have been teachers in this school. Taking merely a few who have attained world-wide repute, and avoiding the perils attendant upon an assessment of their eminence, the roll contains the names of Sir James Dewar, Fullerian Professor of Chemistry, Royal Institution; Sir John M'Fadyean, Principal of the Royal Veterinary College, London; James McCall, Principal of the Veterinary College, Glasgow; A. E. Mettam, Principal of the Royal Veterinary College of Ireland; Stewart Stockman, Head of the Veterinary Department of the Board of Agriculture and Fisheries; Daniel John Cunningham, the much lamented late Professor of Anatomy in the University of Edinburgh; J. G. McKendrick, Emeritus Professor of Physiology in the University of Glasgow; Isaac Bayley Balfour, Professor of Botany, University of Edinburgh; James Arthur Thomson, Professor of Natural History in the University of Aberdeen. These, as well as other men of eminence, have helped to make the school what it is, and have influenced, and been influenced by, the traditions of the institution.

Were we asked to state adequately but briefly what veterinary science has done since the time William Dick first entered Clyde Street as a teacher, we should find the task one of great difficulty, and of difficulty because of a richness of material. Beyond question veterinary science has performed a humanitarian function of surpassing moment in that it has rescued animals from the rough and ready, and even barbarous treatment to which they, when ailing, were subjected during the earlier part—nay, even during a later part—of the nineteenth century. An examination of the tattered manuscript books which it was, and possibly still is the custom to hand down from father to son among farmers, village smiths, and country quacks, produces a feeling of wonder that animals could survive the treatment to which they were subjected, and the weird and loathsome decoctions with which they were drenched. Unquestionably the growth and development of veterinary science has resulted in more humane and therefore more efficacious modes of treatment.

Descending from the humanitarian to the utilitarian standpoint, it can be claimed without hesitation that veterinary science has been of inestimable benefit to the community. In how far the wealth of the country has been, and is being conserved cannot be definitely computed, but an approximation may be attained by the examination of published statistical tables showing the prevalence of contagious diseases and the loss of animal life arising therefrom during the past thirty or forty years.

The recent outbreaks of foot-and-mouth disease have caused a certain amount of commotion among stockkeepers, and trade has been in a degree affected. What must have been the result of the 18,732 outbreaks in 1883 when no fewer than 461,145 animals of various kinds were attacked! And what the dislocation of trade when in February of that year all the country markets were closed for a month.

Contrast the isolated and, now-a-days, infrequent appearances of the disease in the United Kingdom with the returns as given for Continental countries. On the 15th June in Germany alone there were no fewer than 16,504 infected places. Holland had 4,602 outbreaks during the month of May. In Italy 25,004 animals were affected during the week ending April 30th; and in Russia there were 58,274 cases in the month of February. By contrast the returns made by our own Board of Agriculture pale into almost absolute insignificance. Nevertheless it cannot be forgotten that a severe outbreak of foot-and-mouth disease would be a very serious thing. Recently Sir Edward Strachey has, in public utterance, pointed out that not only would there be great loss to the agriculturist, the general public would suffer enormously because of a shortage of milk. This possibility makes it incumbent upon the State to encourage, if not to institute, detailed investigation of the mode of transmission of, and possibility of complete protection from the disease.

The annual reports of the Board of Agriculture afford abundant evidence of the saving of animal life from other contagious diseases, and the consequent prevention of monetary loes to the country.

Cattle plague, which on more occasions than one has produced the wholesale decimation of herds, has been unknown since 1877. In 1891, 9,491 cattle were slaughtered on account of 192 outbreaks of pleuro-pneumonia. This disease has not been known in this country since 1898, whereas from 1891 to 1898 inclusive nearly 16,000 animals were destroyed.

Thanks to efficient steps having been taken, rabies (the very name brings terror) has ceased to exist in this country.

Sheep-scab, which formerly caused so much loss to sheep-owners, is steadily declining, so that last year there were only 556 outbreaks as compared with 1,939 eleven years ago, and 3,092 sixteen years ago.

Glanders, a disease to be feared by man because of its capacity of transmission from animals to the human subject, has also shown a steady decrease during recent years.

The only serious animal diseases which have not as

yet been materially affected by preventive measures are anthrax and swine-fever. These have offered problems difficult of solution, but there is no reason to despair of the ultimate reading of the riddle. Other diseases have prevailed for a time, but scientific investigation and the application of knowledge arising therefrom have ultimately resulted in their subjection. There is much to be hoped for in inoculation and serum-therapy.

While speaking of contagious diseases, it is perhaps not entirely beside the point to make reference to certain facts relative to diseases among animals in more distant parts of the Empire. As will be readily admitted, the presence of contagious animal disease is a factor which tells heavily against the spread of civilisation and the development of the resources of our colonies. Clearly, man cannot establish himself permanently and satisfactorily in any part of the world without domestic animals. Man situated in those regions where animals survive with difficulty is, therefore, seriously handicapped. This is the case in certain parts of Africa. I have been informed recently that during 13 months some 44,000 cattle have died in one single district from East Coast fever. Translate these figures into pounds, shillings, and pence and we appreciate something of the troubles of the African stock-keeper. It is scarcely necessary to say that the authorities are quite alive to the fact that this state of things, and the proper development of the country are not compatible. A properly organised staff of scientific workers is dealing with this and similar diseases, and on that staff graduates of the Dick Veterinary College are extensively represented. Report has it that there is great probability that a means of dealing with East Coast fever will soon be at hand. When this is accomplished the Dick Veterinary College will doubtless shine by reflected glory, for one of our graduates is at present pursuing a very promising line of investigation.

With the help of statistical tables, which are readily available, it is easy to show the decrease in contagious diseases. The prevalence or otherwise of non-specific disease is not so easy of demonstration. It is beyond doubt, however, that veterinary science, by disseminating knowledge regarding the maintenance of hygienic conditions, is doing much to lessen the more common ailments of farm and other animals. Agricultural science has done a very great deal to reform the methods of the farmer. The tiller of the soil has now only himself to blame if he follows the haphazard and unsatisfactory procedures of his forefathers, and reaps accordingly. But in the improvement of agriculture veterinary science can claim a share. The housing and feeding of animals has been studied not only from the purely scientific but also from the economic point of view. It has been demonstrated that there is a right and a wrong way of regarding the animal machine from the point of view of the economist.

In a further very important direction also science is helping agriculture. Breeding is being slowly raised from a process in which chance played the greater part to one in which there may be much certainty. The immortal if muddle-headed Mr. Tulliver was doubtless voicing the impression of most, if not all, his contemporaries when he said: "That's the worst on't wi' the crossing o' breeds you can never justly calkilate what'll come on't." Without wishing to arrogate to science more than is her due, and while admitting that scarcely more than the fringe of the subject has been touched, it may be claimed that the very juvenile science of genetics has already justified its existence, and will, beyond doubt, be of inestimable assistance to the breeder of the future. There can be little doubt that, at no very distant time, it may be possible to "justly calkilate what'll come on't" when certain breeds and individuals are crossed.

The conviction that medical science, veterinary no less than human, must of necessity step aside from its purely curative function and give due regard to preventive measures, is of no new origin. For long it has been felt that preventive medicine had a great future before it, and it is becoming daily more evident that the conviction was well founded. Preventible disease is decreasing; with the more general adoption of hygienic measures it is safe to prophesy that it will continue to decrease. The study of the principles of immunity and their application also make for prevention in no trifling degree.

When disease does effect a lodgement, modern therapeutics—not forgetting serum-therapy—constitutes a powerful weapon whereby the practitioner may stay its ravages. Without doubt the veterinary surgeon of to-day is more fortunate in his equipment than were his predecessors, and not least so in the possession of medicaments, unknown to those who went before him, which have received such attention at the hands of investigators as has removed their use from the realm of empiricism.

In the immediate future, even more than in the present, it will be necessary for the veterinary profession to take a large share in the work of that organisation which has been evolved for the preservation of the health of the people considered as a community. During recent years it has become more and more apparent that the veterinary officer has a function in public health administration scarcely less important than that of the medical officer. It is clear that the health of the community is constantly menaced by danger of a double origin. Not only may disease and death have a human source, there is an animal source as well. Some diseases, such as glanders and anthrax, may be conveyed from animals to man by accidental inoculation. Other specific diseases, such as tuberculosis, may be transmitted to the human subject by the consumption of unsound meat and milk. From his knowledge of all the phases of disease in animals, no one is better fitted than the veterinary surgeon to assist in the safeguarding of man from disease of animal origin.

In most large towns—shall we say in towns blessed with enlightened authorities—there is a staff of efficient and specially trained veterinary officials. The value of their services cannot be put into figures, but in a town like Edinburgh we can say that it is through the instrumentality of highly competent veterinary inspectors that we eat sound meat and drink wholesome milk.

The day is not far distant when veterinary public health officers will form a considerable proportion of the profession. That these men must continue and amplify the work they have been doing for some time past has been emphasised by the recently published Final Report of the Royal Commission on Tuberculosis. In 1901 a Royal Commission was appointed in order that three questions regarding tuberculosis might be answered if possible. One of the questions was whether the disease in animals and man is one and the same. This has been answered in the affirmative, so also has the question whether animals and man can be reciprocally infected with it. Of the three questions the third is of supreme importance from a public health point of view, and was stated in these terms: "Under what conditions, if at all, the transmission of tuberculosis from animals to man takes place, and what are the circumstances favourable, or unfavourable, to such transmission." The Report of the Commission, upon which sat one of the most eminent members of the veterinary profession, a graduate of the Dick College, may be allowed to answer the question largely in its own words. "Only rarely has a pulmonary lesion in adult man yielded the bovine bacillus." But "our experience of abdominal tuberculosis in the human subject has been very different, especially as regards children. Of young children dying from primary abdominal tuberculosis, the fatal lesions could in nearly

one half of the cases be referred to the bovine bacillus and to that type alone. In children, too, and often also in adolescents, suffering from cervical gland tuberculosis, a large proportion of the cases examined by us could be referred to the bovine tubercle bacillus." "Whatever, therefore, may be the animal source of tuberculosis in adolescents, and in adult man, there can be no doubt that a considerable proportion of the tuberculosis affecting children is of bovine origin, more particularly that which affects primarily the abdominal organs and the cervical glands. And, further, there can be no doubt that primary abdominal tuberculosis, as well as tuberculosis of the cervical glands, is commonly due to ingestion of tuberculous infective material." "The evidence which we have accumulated goes to demonstrate that a considerable amount of the tuberculosis of childhood is to be ascribed to infection with bacilli of the bovine type transmitted to children in meals consisting largely of the milk of the cow." "But it must be remembered that we have found cases of tuberculosis in adult man sufficiently extensive to incapacitate the patient from the ordinary duties of life, and in two instances ending fatally, in which we were able to attribute the disease solely to the effect of the bovine tubercle bacillus."

The extent of these quotations is justified by the imperative necessity that the public and public authorities should be informed, on every possible occasion, of the momentous conclusions arrived at by a body of scientific men who have devoted their energies to the matter for the past ten years. With no uncertain voice have they made it clear that the services of the veterinary surgeon are needed—and urgently needed—in order that that much and naturally dreaded disease, tuberculosis, may be exterminated. For the sake of the children alone, if not also for the sake of adolescents and adults, tuberculosis in animals must cease to exist, and in the work of bringing about this eminently desirable state of affairs the veterinary officer of health, as well as the veterinary surgeon in general, must take a part. One more quotation from the Commission's report. "In the interests therefore of infants and children, the members of the population whom we have proved to be especially endangered, and for the reasonable safeguarding of the public health generally, we would urge that the existing regulations and supervision of milk production and meat preparation be not relaxed; that on the contrary Government should cause to be enforced throughout the kingdom food regulations planned to afford better security against the infection of human beings through the medium of articles of diet derived from tuberculous animals."

In view of the fact that fresh fields of activity are opening up for the veterinary surgeon both at home and abroad, no effort must be spared to keep the veterinary schools abreast of modern requirements, or rather one should say that the schools must be ahead of present needs in order that there may be a suitable margin of preparedness for subsequent developments. The present is a momentous period in the history of veterinary science in general, and particularly in Scotland. The next few years, it is confidently expected, will see such changes as will render it certain that the Dick College will advance in its position as one of the leading veterinary schools of Europe. The governing authorities are alive to the fact that the modern veterinary graduate must have a very different training from that received by his predecessors. Not only must he possess a first-hand knowledge of the more ordinary branches of his profession: he must be prepared to enter the ranks of those specialists who are so rapidly increasing in numbers. The graduate must not be content to have been spoon-fed by his teachers. He must have seen things for himself, *i.e.*, he must have done practical work in the laboratories and in the hospital, in the stable, the byre, and the kennel. He must know something of veterinary public health administration. He must, in short, be ready with a substantial foundation upon which to erect a super-structure of knowledge for utilisation in his work as a general practioner, as a member of the Army Veterinary Service, as a public official, either at home or abroad.

This means that the veterinary schools must expand their accommodation and equipments; must not relax in any degree their efforts to provide their students with a sound preliminary professional grounding, must be in a position to meet future calls upon their resources.

It must not be forgotten that to the schools look the practitioner, the animal owner, the agriculturist, and the general public for those additions to knowledge which shall make for increased efficiency of the professional man, which shall produce diminution of animal disease, and which shall ensure greater safety of the community from diseases and dangers of animal origin. Great though the recent advances of science may have been and many the secrets which have been probed, there is no fear that the scientist will imitate Dr. Busby and decline to remove his hat in the presence of the King for fear that the by-standers may not note what a great man he is. That which has been done merely serves to give some feeble indication of how much remains to be done, and engenders a feeling of humility rather than pride. There can be no resting on our oars. We must pull towards the light. The schools, therefore, in addition to being places where students are trained, must also be in a position to give habitation and encouragement to those who are prepared to devote their time and energies to the elucidation of problems the solution of which can but be of benefit to their fellow men.

AN UNUSUAL CASE OF POLL-EVIL.

A brown cart mare had been treated several times for a slight swelling over the region of the poll; being an extremely difficult animal to control, no surgical treatment was adopted until absolutely necessary. The swelling would break, discharge a small quantity of pus, then disperse, and the animal would work for some considerable time until the swelling appeared again. She was recently admitted to infirmary with a much larger swelling than usual, which broke and discharged a fair quantity of pus; the mare would not submit to handling of any sort, so we decided to cast and operate.

The animal was chloroformed and a probe passed from a sinus on top of poll, the direction of which was downward and forward. On attempting to open this outward so as to secure drainage the knife came in contact with bone. We were completely at a loss to understand the anatomical condition, it seemed quite impossible, however, to secure adequate drainage, the ligament was curetted and the animal allowed to rise, which she did without much trouble. In about 24 hours she was down in the box and unable to rise; we then suspected that we had probably got into communication with the spinal cord. The mare was destroyed with a thoracic injection of hydrocyanic acid.

Post-mortem.—The ligamentum nuchæ was diseased, but not to any great extent: there was,

Posterior aspect.

Lateral aspect.

AN UNUSUAL CASE OF POLL-EVIL.

To illustrate case by H. D. Jones, M.R.C.V.S.

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however, a fairly recent bony deposit on the occipital bone, there was also a recent deposit of bone on the floor of the spinal canal between the occipital bone and the atlas. The photograph of the posterior aspect of skull shows the canal into which the probe was passed—the knife was probably on the floor of the spinal canal. The atlas was completely fused to the occiput, no condyles could be seen, and the right styloid process was anchylosed to the wing of atlas. No movement of any sort was possible between the skull and atlas, the angle at which the atlas was fixed is peculiar, as shown in photograph of lateral aspect.

H. D. JONES, M.R.C.V.S.

Peckham, S.E.

GASTRIC AFFECTIONS OF RUMINANTS.

As Mr. E. Wallis Hoare has invited opinions *re* the gastric diseases of ruminants, from his fellow practitioners, I give my opinions thereon for what they are worth, and they are the result of many years practice, and of a particular interest in cattle practice. I am quoting facts and not writing from book reference. We are students always, and I am always happy to learn something from my professional brethren—an interchange of opinion and of experience gleaned from long years of practice is a good thing for us all, as we are apt to get into certain grooves in diagnosis and treatment which, to many old practitioners, are as the laws of the Medes and Persians, which altereth not.

A good book on cattle pathology is much needed, particularly now that horse practice is on the wane. Cattle is perhaps not so clean as horse practice, and is not always as easy of diagnosis and treatment, but it is quite as lucrative, no motor car will oust the cow or sheep, so it behoves the coming V.S. to give more time to the study of the diseases of cattle and sheep, and even poultry and pigs. I hope success will attend Mr. Hoare's efforts and that his book will run through many editions.

Now as to Mr. Hoare's queries.

No. 1. Does impaction of the omasum occur as a disease *per se*?

My experience is in the negative. I have never in all the post-mortems during 34 years experience seen any but a dry condition of this part of the digestive tract of the bovine, both in health and disease. Of course there are degrees of dryness, but have never seen them really soft. I think it quite possible that the contents of the omasum may be dryer where inflammation of the abomasum exists, due no doubt to retention of its contents while the function of the true stomach is in abeyance.

I quite agree with other practitioners that purgatives given in excess have a very deleterious effect. I often wonder how bovines stand as much dosing with physic of various kinds as they do without fatal results, it is no uncommon thing to hear of cattle getting a stone of treacle, 2 or 3lb of salts, Ol. lini. by the quart, currants, rancid bacon, sundry pounds of butter, etc., and yet, in spite of all this treatment the animal does not *always die*. I expect the major yart of this mixture lies dormant in the rumen; a certain amount of absorption no doubt takes place, but very little acts on the other stomachs and intestines. We were taught that fluids administered *slowly* by the mouth passsd on to the reticulum, but I believe from post-mortem evidence that the bulk passes directly into the rumen, a part may pass on to the recticulum and act as a purgative.

The digestive organs of bovines are wonderful in their operation. The rumen I look upon as a reservoir to collect all that is eaten to satisfy hunger until that craving is satisfied; rumination then takes place, and the reservoir is gradually emptied by the beautiful and complex action of the reticulum, etc., there is no doubt that a certain amount of roughly masticated food finds its way into that viscus, and from thence passes on by an automatic process to the œsophagus and mouth where rumination takes place, and then the mixture of this masticated food with saliva, etc., passes on to the omasum, and there undergoes a process of squeezing, and absorption of the more fluid parts, the rest passing on to the abomasum and intestines.

The terms "Murrain," "Dry murrain," "Red Murrain," "Blain," "Gloss anthrax," "Worm in the tail," etc., I am afraid I am lamentably ignorant of, and I hope Mr. Hoare will, in his new book, treat them as "Terminological inexactitudes," and beneath the notice of an up-to-date treatise on cattle diseases.

Query No. 2. "Gastritis." This disease is not uncommon, and in my experience, both acute and subacute, and in the acute form is undoubtedly very fatal. The causes are certainly very obscure in many cases, but I am quite of opinion that it is due in most cases to errors of diet. Cold is another cause; changeable weather, standing in water when heated, etc. I have known it follow the animal being fed on too great a quantity of mangolds, soya cake, rich fog grass, acorns, potatoes, white turnip tops, decomposing turnips, and in some cases to some unaccountable herbage. I had cases recently where several head of cattle died from inflammatory disease of the abomasum and intestines with effusion of blood, they fed on a certain pasture and for two years running in the month of August the same disease appeared. I reported the case to the Board of Agriculture, and a veterinary inspector was sent down to investigate the disease, and although a post-mortem examination was made on a beast which has just died, and I sent the blood of one that was ill to the laboratory, no definite diagnosis was made. Brackens and tormentil were suspected as the cause, but on cattle being fed on these plants at the laboratory at Alperton, negative results were obtained.

In the case of inflammation of the abomasum from eating acorns, mangolds, soya cake, white turnip tops, and decomposing mangolds and turnips, and potatoes, I believe it due to some irritant in the composition of these foods, or it might be called a toxin. I have heard that white turnip tops and mangolds contain a certain quantity of oxalic acid, but have not been able to verify this.

I have seen brain and nervous symptoms in cases of abomasitis, the animal showing great excitement and distress, a rise of temperature taking place in most cases: there is generally a complication of enteritis, the contents of the intestines often being sanguineous—this state, of course, being found post-mortem.

I always give aperients in repeated small doses (but never large doses of strong cathartics), followed by treatment of symptoms.

In impaction of the rumen, which occurs from many causes, chiefly, I believe, from a gluttonous beast over-eating itself, and in some cases from drinking too much very cold water. I rely on oft-repeated doses of aperients combined with tonics of various kinds, and if tympanitis occurs my sheet anchor is Ol. menth. pip, Tinct. nux vomica, and Spts. amm. arom., and these have, as a rule, the desired effect. The trochar and canula and rumenotomy as the last resort.

When paralysis of the digestive tract takes place, the cases take a lot of bringing round, and the cause of death is often due to this state of things as the post-mortem reveals nothing to account for death. During inaction we often have cases of indigestion there is no doubt.

No. 4. "Spewing the cud." This I have seen often, but could never satisfy myself as to the cause. I am always suspicious of nerve lesion, and treat accordingly; they generally recover the normal cud with this treatment. I once had a case that was most intractable and went on for weeks, the trough being half full of half masticated hay and fluid. I thought it a hopeless case, but all at once it stopped, and the cow regained its natural cud and got fat; it might have been due to the bursting of an abscess. Casting the temporary teeth may account for some of these cases. It is a common trouble in calves, but they generally recover as they get older.

G. E. Nash.

Richmond, Yorkshire.

ABSTRACTS FROM FOREIGN JOURNALS.

Cerebral Embolus Produced by "Strongylus Vasorum."

Capdebielle and Hussenet record (*Revue Vétérinaire*) the case of a fox-terrier bitch, fifteen months old, which for eight days refused all solid food, only taken a little milk and vomiting it almost immediately. Suddenly she manifested epileptiform attacks, showing rather marked postration, contraction of the muscles of the limbs, twisting of the head upon the neck, oscillation of the eyes, salivation, and emission of urine. The attacks were repeated frequently in the day and caused the death of the animal.

Post-mortem, lesions of acute gastro-enteritis were found. The lungs were filled with miliary granulations of a greyish colour and a firm consistence; in certain parts of the lung more voluminous nodules were seen. Histological examination of cut sections showed that each nodule had developed in a small branch of the pulmonary artery containing strongyles, which proved to be specimens of the *Strongylus vasorum*.

The brain was examined, and its left hemisphere showed a rounded brown patch, about four-fifths of an inch in diameter, very slightly depressed and softer in consistence than the surrounding tissue. Incision of this revealed a hæmorrhagic focus, containing a clot the size of a large nut, and extending as far as the roof of the lateral ventricle. Microscopical examination showed a strongyle embryo, still living, in the midst of the clot.

This unexpected discovery explained the pathogeny of the symptoms which had been observed. The centres of pulmonary strongylosis, which had been unsuspected during the life of the animal, had allowed the escape of a strongyle embryo, which had gained the left side of the heart, had thus become launched into the general circulation, and had become arrested in a capillary of the brain.—*Annales de Méd. Vét.*

(Without a careful post-mortem examination this case might easily have been set down as "ptomaine poisoning," arising from digestive disturbance.—Transl.)

Bismuth Injections into Fistulæ in Veterinary Practice.

Bauza (*Revista de Méd. Vét. Montevides*) gives an account of the now well-known "Beck's method" of treating old fistulæ, which consists in the injection of a mixture of wax, vaseline, paraffin, and subnitrate of bismuth. He reports four cases in which the method gave him excellent results. One was in a young Normandy bull having an abscess of the left side, which had been opened and treated without success by various antiseptics. Recovery took place in fifteen days after two injections. The second was in a Dutch cow having an abscess of the shoulder, which also had been treated without success. Treatment by Beck's method led to recovery at the end of twenty-five days after only one injection. The third was in a draught horse having a voluminous hæmatoma in the region of the haunch, which had been opened, became infected, and resisted ordinary methods of treatment. Recovery took place under Beck's method after a single injection. The last case was in a mule, the pectoral region of which bore an abscess having a fistulous course, originally caused by a pointed foreign body. This recovered in eleven days under Beck's treatment by means of a single injection.—*Annales de Méd. Vét.*

Tuberculosis of the Testicle after Castration by Crushing.

Gergely, of Hatvan, records (*Allatorvosi Lapok*) the following case of an ox, which, when castrated, had been operated upon by the method of crushing the testes. At the age of eight years, this animal was brought to the slaughter-house, it being said that a veterinary surgeon had advised his destruction on account of nephritis. The ox's temperature was then 104·3° F., and the pulse counted 56 per

minute. Bleeding was very free after division of the cervical vessels.

Post-mortem, the peritoneal cavity was found to contain 15 litres (about 26 pints) of a reddish transparent fluid; while the pelvic wall showed numerous tubercles ranging from the size of a millet seed to that of a bean.

The spermatic cords were swollen to the thickness of the human arm, with the remainder of the testes attached to their ends. The latter—each of which was about the size of a child's head—when cut into, showed a marbled surface of section beset with numerous caseous foci.

Castration by crushing of the testes had established a *locus minoris resistentiæ*, in which tubercle bacilli (probably coming from the intestine into the circulation in the first place) had collected and set up tuberculosis of the testes.

The mucous membrane of the bladder also showed some reddish-black coral-like growths. No tuberculous lesions were demonstrated in the kidneys, spleen, bones, and other organs.—*Berliner Tier. Woch.*

Infectious Hepatitis of Swine.

Josef Tautenui describes *(Allatorvosi Lapok)* an acute infectious disease of swine, leading to death in from 9 to 48 hours, which he has observed. High fever, loss of appetite, prostration, and dyspnea are the symptoms during life; while tympany and putrefaction appear very soon after death. The anatomical lesions are—hyperæmia of the large intestine, sanguineous infiltration of the gastric mucous membrane, swelling of the spleen, and a special appearance of the liver, which is soft and swollen, but later becomes almost elastic, and is beset by many vesicles. The lungs are œdematous, and the heart shows fatty degeneration.

The disease is incurable, and generally appears in places where swine fever is prevalent. It may be distinguished from swine fever partly by its rapid course, and partly by the hepatic lesions. It is differentiated from swine erysipelas by the fact that the redness of the abdominal skin which is noticed in its later stages is a hypostatic alteration, whereas in swine erysipelas the skin shows inflammatory symptoms. Moreover, the hepatic lesions are not seen in swine erysipelas.

Microscopically; a bacillus resembling that of malignant œdema is demonstrated in the liver. —*(Berl. Tier. Woch).*

W. R. C.

SOUTHERN COUNTIES' VETERINARY SOCIETY.

Meeting at Aldershot.

A meeting was held on Thursday, Sept. 28th, and was rendered additionally interesting by the kindness of the General Officer Commanding in Chief (Aldershot Command) in affording an opportunity for the inspection of the Army Veterinary School. The business meeting was held at the Royal Hotel, Mr. S. H. Slocock, of Hounslow, presiding in the absence, owing to illness, of the President, Mr. W. Hunting, and the following members and visitors also signed the attendance book: Prof. G. H. Wooldridge, London; Messrs. H. A. Archer, Southsea; W. Burt, junr., J. H. Lockwood, Brighton; G. W. Bloxsome, Harold Leeney, W. K. Stuart, Hove; B. H. Benson, Reading; W. Caudwell, Chertsey; W. A. DellaGana, Southampton; C. W. Howard, Dorking; F. G. Samson, Mitcham; H. Smith, J. Alex. Todd, Worthing; D. Wyllie, Staines.

Visitors: Major A. C. Newsom, A.V.C., London; Messrs. C. Barnwell, H. G. Brookman, A. N. Cannon, Worthing; W. H. Brown, W. W. Henderson, and A. Whitelaw Carter.

On the proposition of Mr. Burt, seconded by Mr. Smith, the minutes of the last meeting as published in *The Veterinary Record* were taken as read and confirmed.

The Hon. Sec. reported that he had that morning received a telegram from Miss Hunting in the following terms:

"My father is ill in bed. He desires to express his regret. He especially wished to see the Army School and take part in the discussion on Mr. Bloxsome's paper."

The Chairman said he was sure they all regretted the absence of their President, and that it would be their wish to convey this regret to Mr. Hunting. He suggested that they should ask Mr. Todd to write a letter to that effect.

Prof. Wooldridge: And also express our hope for his speedy recovery.

Mr. Stuart seconded, and the proposal was at once agreed to.

Apologies and expressions of regret at inability to attend were also announced from the following: Col. F. Smith (A.V.S.); Prof. F. Hobday; and Messrs. E. Whitley Baker, R. Burt, A. L. Butters, C. J. Callow, W. A. Collins, J. B. Dier, Haywood Jeffries, J. B. Martin, W. F. Maynard, F. Marks, D. Pugh, R. Roberts, C. Roberts, W. Shipley, C. H. Spurgeon, R. A. Thrale, F. T. Walder, and A. Whicher.

A letter was read from the Editor of *The Veterinary News* inviting subscriptions towards the fund which is being raised to assist Mr. William Kirk in his appeal against the action raised by the London County Council to compel veterinary surgeons to pay for the use of the College crest.

Mr. DellaGana proposed that the matter rest where it was and that they take no action, and this was seconded by Mr. Burt.

Prof. Wooldridge, on the other hand, suggested that they should give a subscription to the fund. He did not regard this at all as a personal matter. For himself he should not think of using the crest, but there were other members who might wish to do so, and he thought they ought to support them.

Mr. Burt, Mr. Stuart, and Mr. DellaGana, however, all spoke strongly against taking any action in the matter.

Prof. Wooldridge, in the circumstances, announced that he would not press his amendment to a vote.

Mr. DellaGana's motion not to take any action was accordingly put and carried by five votes to two.

A communication from Prof. Gofton *re* the scheme for the amalgamation of Veterinary Societies, was on the suggestion of Mr. Burt, ordered to be placed on the agenda for consideration at the next meeting.

Nominations.

Messrs. W. W. Henderson, of Haslemere, and T. A. B. Cocksedge, of Emsworth, were nominated for membership, on proposition of Mr. Archer, seconded by Mr. Burt.

The selection of a place for the next meeting was next considered, and on the proposition of Mr. Burt, seconded by Mr. Stuart, it was decided to meet in London during the Cattle Show week, as in former years.

"Some Debatable Points of Unsoundness in Horses."—By Mr. Gerald Bloxsome. (Adjourned Discussion).

Mr. W. A. DellaGana reopened this discussion, and read the following contribution:

All of you have no doubt seen the very interesting and practical paper by Mr. Gerald Bloxsome on "Some debatable points of unsoundness in horses," read at a recent meeting of this Society. The points raised by the essayist for discussion, refer mainly to the definition of soundness and unsoundness; and its relation to splints, sidebones, ringbones, the abnormal development of processes of bones, and spavin, most of them resulting from some form of ostitis.

With regard to a definition of the term "unsoundness," I think the simplest one I know of, is—any deviation from the normal, which is, of course, purely a classical one. A more practical definition, I venture to say, would be, "Any defect in the animal likely to, immediately, or at any future time, prevent it from doing that work which might be required of it.

We know that there are few horses over five years old which do not exhibit "splints"—the most common form of exostosis in equines. Many foals were born with them. Much has been written on the subject of splints, and notwithstanding, we still look upon them as an unsoundness, and it remains for us to advise our clients accordingly. I do not think that there is a more troublesome cause of intermittent and severe lameness in its earlier stages in horses than due to splint formation. Once a splint always a splint, and I quite agree with the essayist inasmuch that he would preferably purchase a horse with a splint than a horse without one, splints are undoubtedly an unsoundness and should always be mentioned in certificates.

Most of you who have had experience amongst heavy horses will appreciate Mr. Bloxsome's remarks upon the vexed question of sidebones, a fruitful and, in my opinion, a frequent cause of unsoundness and lameness in horses of the heavier breeds. I believe that some practitioners go to the extent of not considering this as a serious condition at all, provided that the foot be a large and open one. On the contrary, I have found sidebones a very frequent cause of lameness in heavy cart-horses, especially when overtaxed with work. We know of horses with immense sidebones doing their work continuously and well without showing any lameness whatever. My contention is that a horse affected with sidebone, so long as the feet are not subjected to lateral strains such as for instance the horse bringing the foot hard down upon an uneven surface, it will continue in work free from lameness.

I have not yet seen a light horse, hunter or hackney, affected with sidebone free from stiffness or lameness, but I will not deny the utility of such an animal. We know that many military horses are annually cast as useless for being affected with sidebone.

Ringbone, to my mind, is a very much more serious condition than the foregoing, and a frequent cause of lameness in all breeds of horses.

It is in the earliest stages of development when we find the greatest difficulties in arriving at an exact diagnosis. The so-called incipient ringbone is responsible for much difference of opinion.

I quite agree with Mr. Bloxsome regarding his remarks upon the coarse development of the processes on the distal ends of the os suffraginis, a condition which occurs mostly in underbred horses. The only possible means to arrive at a definite decision is to examine the opposite leg, and should the condition prove to be symmetrical, or there be a general defective conformation of the whole of the extremities, we might then express a guarded opinion.

Lastly, but not least, the essayist refers to that hardy annual, that burning question, "A spavin or not a spavin?"

No bone disease of equines has in past times, and I think I can safely assert in future times also, has, and will, excite as much controversy as this one.

Apparently what we have to decide is "When is a spavin not a spavin?" for any enlargement on the inner side of the horse's hock, no matter of what nature, is generally referred to as a spavin.

This question, gentlemen, will, I think, alone provide ample matter for discussion, and should we be able to arrive at some definite conclusion, then I think we will have reason to congratulate ourselves.

Discussion.

The Chairman said he hoped the discussion would be kept alive, for he was sure the paper warranted it. There was just one stipulation he ought to make perhaps. They were expected at the Army Veterinary School at half-past three, which did not give them very much time, and if each of them would confine his remarks, say to five minutes, it would give them all a fair chance.

Mr. Burt remarked that there was one or two points he would like to mention, or rather to obtain information upon, if that were possible. Mr. Bloxsome said he could honestly say that when a sidebone was so formed that one could positively state that it was present, he had never seen the horse suffer from lameness from it.

Mr. Bloxsome: When you can feel the sidebone above the coronet.

Mr. Burt: You have never seen a horse lame from sidebone?

Mr. Bloxsome: No.

Mr. Burt, continuing, remarked that a large proportion of his practice had been among heavy horses, and while he had never been able to say that the animal was lame from sidebone when he could not discover it, they had suggested there was an inflammation of the coronet which was possibly the commencement of sidebone. In his experience forty per cent. of the lameness of the fore feet in cart horses was due to sidebone, either formed or sufficiently palpable for them to be able to say definitely it was sidebone. Personally he was a great believer in firing horses for sidebone, and he had found they generally came up sound again after five or six weeks. Of course, the trouble might not have been due to sidebone, but if it was not it was rather a remarkable coincidence. One might say, he supposed, that in ninety-five per cent. of the lameness there was no veterinary surgeon who could speak positively as to the cause, but when they started diagnosing by a sort of negative reasoning, commencing with the shoulder downwards, and found at last the presence of sidebone, he thought they would admit that at all events they had then got something to go upon. To take another point, Mr. Bloxsome had remarked on the fact that sidebone did not appear to be so common amongst hunters, but here again it was very difficult to disprove a statement of that kind. He had seen one or two light hunters used for harness work that had sidebone, and they had been distinctly lame. They had nothing else the matter with them, and the only assumption one could consequently form was that they were lame from the presence of sidebone. Mr. Bloxsome told them the conclusion he had arrived at was that although they must clearly class sidebone as an unsoundness, still in the state in which they were able to recognise it it did not cause lameness, but if it did not cause lameness why class it as an unsoundness.

Prof. Wooldridge asked in what way Mr. Burt fired for sidebone.

Mr. Burt: Either puncture firing or line firing.

Prof. WOOLDRIDGE: The reason I asked is that a so-called modification of Smith's operation is sometimes practised with success.

Mr. SAMSON had not read the paper very minutely, but there were one or two points he certainly could not agree with Mr. Bloxsome upon. It might be, however, that their practice had been among a different class of horses. With regard to the liability to an action at law, he had always understood they could not compel a man to take a horse back, the proper way was to resell the animal and then bring an action to recover the difference in the price. With reference to splints, Mr. Bloxsome said a good deal was made of the position, but that when once formed and the horse went sound he did not believe it made the slightest difference where it was placed. In his (the speaker's) opinion if they got a splint well up under the knee it did make a difference—and a radical difference, for that horse was more than likely to be unsound, and very lame for the rest of its natural life.

Then, again, Mr. Bloxsome said he believed in the statement once made by Professor Macqueen that the latter had never seen a horse lame from sidebone, but he (Mr. Samson) certainly could not agree with that. In the course of his experience he had seen many cases of lameness from sidebone and nothing else, and the lameness had unfortunately lasted—sometimes much to his cost. With firing for sidebone he had had very good results, but he found the majority of people put the firing off until the sidebone was too well formed. For firing to be any good in cases of sidebone it should be done early, and then, he thought, it was quite immaterial whether they used the deep puncture firing or the line firing. To take another paragraph in the paper, Mr. Bloxsome said he could call to mind many instances of brilliant performers amongst hunters keeping perfectly sound with large sidebones, and he quite believed that. On the other hand there were many cases of sidebone which went very lame and kept lame, particularly where the ground was a bit hard.

Then, again, Mr. Bloxsome stated that true ringbone, where the joint was involved, always caused lameness, but he did not agree with that. It certainly did in many cases, but in many other cases ringbone did not cause lameness any more than splints. As to calling a horse sound, he thought it was a very bad practice to state whether it was sound or unsound. The best plan was to say that in their opinion the animal was practically sound, or was a useful animal and one they could advise their client to purchase, but to point out that it had got splints or sidebones as the case might be, and that these might possibly cause trouble in the future. If they gave a definite certificate that a horse was sound it was ten to one they would have the animal sent back to them sooner or later.

Mr. ARCHER very much doubted whether the fact of putting on a certificate their opinion as to whether a horse was sound or not screened them at all in point of law, because everyone knew the certificate represented their opinion, and the fact of their being qualified to give an opinion bound them in point of law to that opinion. He had seen a good many cases of sidebone in which it had caused lameness, both in heavy and light horses. One reason why they were an unsoundness, or should be considered such in his opinion, was this—especially when they were associated with ringbone—they caused a certain rigidity of the limb resulting in damage to the flexor tendons. It interfered with the natural action of the limb, and they got an extra strain on the flexor tendons which very often caused lameness there. With regard to splints, he was certainly convinced that the position had a very material influence on the question whether it caused lameness or not. When a splint was well forward on the bone so that they could see it, it was not nearly so likely to cause lameness as when it was further back. Also when it was well up under the knee they almost always got lameness. It was quite possible to have spavin without causing any actual lameness, but there was usually a general stiffness of the joint, if not actual lameness, and any animal with spavin he considered ought to be classed as unsound. Personally, he generally mentioned that such and such things were present, but that otherwise he saw no unsoundness. He thought it was the best way to safeguard oneself from giving a definite opinion. They implied that it was unsoundness but did not actually say so. On the other hand, if there was no interference with the action of the animal he thought they might fairly give a certificate of soundness.

Prof. WOOLDRIDGE did not know but that they were getting a little off the track in discussing the method of writing certificates for unsoundness, although while they were on this matter he must say he did not think it was wise for them to be over cautious in the wording of their certificates. He meant that they should form an opinion and then write that opinion down definitely and clearly, and he did not think Mr. Archer's method was to be recommended. On the question of spavin he quite agreed with Mr. Bloxsome, although he did not know whether he had introduced the term "spurious spavin" seriously. All of them who had had any experience of horses and the examination of them would have examined hocks that had been uneven, but which had given no direct indication of exostosis, and which in the light of after experience they had found to wear exceedingly well. If such a horse passed its trial without showing any interference with its action he mentioned the fact that it had "odd hocks" but did not use the word spavin at all. He did not think it wise to use the term "spurious spavin." Either the animal had spavin or it had not. As regards the legality of certificate he believed that if as professional men they exercised a proper amount of skill and care in the examination of any animal submitted to them, and they came to a certain conclusion, they were not liable in law for damages even if it should be found out afterwards that that conclusion was not correct.

He did not know whether he could agree with Mr. Bloxsome with regard to the effect of splints. He believed he suggested in his paper that one could not legally certify a horse as being sound when splints were present. He thought they could.

Mr. BLOXSOME: You cannot.

Prof. WOOLDRIDGE: Well, if there has been any legal ruling on that point I should like to know it.

Mr. BURT: What is your definition of unsoundness?

Prof. WOOLDRIDGE: Any condition which interfered with the natural usefulness of the animal either at the time or at some future date. Prof. Wooldridge added that he did not suggest the definition mentioned by Mr Bloxsome of being absolutely free from disease because if that was to be the condition he was afraid there was not a sound horse in the world and never would be.

The effect of sidebone he admitted was a very vexed question. He had seen a large number of horses in which sidebone had not interfered with their action, but he could not agree with Mr. Bloxsome that horses with well developed sidebone never went lame from that condition. It depended perhaps on what they would call lameness. He had seen horses with a decidedly cramped action, and he had regarded that cramped action as a phase of lameness, and as having been due to sidebone. Personally he should certainly class sidebone as an unsoundness, on the ground that it was impossible to say whether lameness would occur or whether it would not. He had been rather surprised to hear Mr. Bloxsome say that at least fifty per cent. of cart horses developed sidebone in studs where the animals had been carefully selected. He confessed that he had no figures to go upon, but he was surprised to

hear the percentage was so large. With regard to the treatment for sidebone he believed what was known as as Smith's operation had produced as good results as any.

The CHAIRMAN remarked that before calling on Mr. Bloxsome for his reply, there were one or two things he should like to refer to briefly himself. The first was the definiteness, or indefiniteness, of the certificates which they gave. Personally he did not think it paid to give an indefinite certificate. If there was one failing which they had as a profession he thought it was this one of not being sufficiently definite when they were asked for their opinion, and they would generally find that the practioners who were doing the best were those who gave the most definite opinions, although very often they might be wrong in those opinions. A man could make any number of mistakes and so long as he was sufficiently definite in his opinion he did not believe it really mattered much, but at the same time when asked to state whether a horse was sound or not, they wanted to allow a certain amount of latitude in the framing of their certificates, because the use of the word unsoundness might deter a client from buying an animal when as a fact the horse would be a very useful one for the purpose for which it was required. He should be inclined to say that in his opinion the horse was sound, adding that he noticed it had splints, but that in his opinion they were never likely to cause any trouble.

With regard to the position of splints, he must admit that that had a very great deal to do with the question. In his opinion a splint did not cause lameness for any length of time so long as it did not interfere with the natural action of the animal. Sidebone also caused lameness on its formation, but it did not follow that lameness would last. He happened to drop into a practice where there were a lot of heavy horses, and he noticed that although he tried to select horses that were free from sidebone he got a tremendous amount of lameness amongst them. In fact he believed he had less lameness in the horses with sidebone than in those without. He thought they sometimes lost sight of the fact that there was a sidebone connected with ringbone, and it was a very shrewd observer who could say a horse was free from ringbone.

Mr. BLOXSOME being invited to reply, remarked that it had been a matter of great gratification to him to have such a long and varied discussion on the thoughts he had committed to paper, but as the time was short he would endeavour to make his reply as brief as possible. The first point he wished to touch upon was that of the definition of unsoundness, and here he should like to say that the definition he had given them was not his own but was the one which was accepted in all Courts of Law. Mr. DellaGana he believed had suggested "any deviation from the normal" as a definition of unsoundness, but he could not agree with that, because a horse might have any number of malformations without its soundness being affected. With regard to sidebones, he fully expected there would be a great difference of opinion about the statement of Prof. Macqueen which he had quoted, but as he had explained he did not say a horse never went lame from it. What he did say was that if they went in the ordinary way of examination and saw a horse with sidebone when the process of ossification had got to that stage that they could feel the formation of the bone above the coronet, he had never yet seen a horse lame from it. Plenty of horses that had sidebone were lame, but that did not prove that they were lame for sidebone. There were many other troubles in the hoof which might be associated with lameness, and if they looked carefully and long enough they would generally find them. One of the most frequent causes of lameness connected with sidebone was low ringbone. There was nothing to be seen or felt, but they might satisfy themselves by the use of cocaine, or other means, that the lameness was in the hoof, and by a negative process of reasoning they could put everything else out until they came to low ringbone. While the process of ossification was going on below the coronet it was only reasonable that the horse should go lame. No one could say definitely whether it was from the formation of sidebone, but it was quite possible it was. With regard to splints, and the wording of certificate, what he wanted to guard against was the giving of general certificates, such as saying "I examined a bay gelding and in my opinion she is sound." Certificates of that sort were of no practical value whatever, and if a dealer got hold of them they could be used for a dozen of bay geldings. They could not be too careful in getting all the recognition marks possible down on their certificate, and then he did not think they were called upon to say whether the horse was sound or unsound, because according to the law as it is to-day, a horse with splints is unsound. Prof. Wooldridge objected to the use of the term spurious spavin, but he only called it that for the purpose of his paper. They did not want to use the word spavin in any other way than for spavin. The question was to decide what was spavin. He quite admitted that was a difficult point, but what he wanted to draw attention to was that absolute symmetry was not necessary to soundness. All they could do was to exercise every care while they were examining horses where there was a difference in the size of the hocks.

On the proposition of the Chairman, seconded by Mr. DellaGana and Mr. Smith, a hearty vote of thanks was accorded Mr. Bloxsome for his paper, and a similar complaint to Mr. Slocock for presiding, proposed by Mr. Stuart, and seconded by Mr. Lockwood, brought the proceedings to a close.

CENTRAL VETERINARY ASSOCIATION (IRELAND).

A general meeting was held at O'Carroll's Hotel, Ballinasloe, on the 2nd inst. Mr. A. J. Moffett presiding. Present: Messrs. J. Nolans, Birr: E. A. Ryan, Strokestown; W. C. Patrick, Mullingar; A. J. Bolton, Athlone; A. J. O'Dea, Tuam; C. Tracy, Ballinasloe; and E. C. Winter, Limerick, Hon. Sec.

Letters of apology were received from the President, Mr. J. F. Healy and Mr. P. J. Howard, stating they could not travel on account of the railway strike. Apologies were also received from Messrs. M. Hedley and J. Holland.

The minutes of last meeting, as published in *The Veterinary Record*, were approved.

Mr. J. C. Doran wrote and regretted that he had not prepared a paper for the meeting.

A discussion took place on the fact of veterinary inspectorships, under the Contagious Diseases Act, and the Dairies, Cowsheds, and Milkshops Order, being given to laymen, where veterinary surgeons were available.

The Secretary was directed to collect information for the next meeting, from the various public bodies as to the numbers of these appointments and the emoluments they carried, with a view to again approaching the Local Government Board on the matter. Some of the members were of opinion that local veterinary surgeons should take the appointment even at a very small salary so as to retain them in the profession, and then apply for an increase of salary on showing the amount of work done.

The SECRETARY directed attention to the subscription list, many members being in arrears, and was directed to press the defaulters.

E. C. WINTER, Hon. Sec.

ROYAL (DICK) VETERINARY COLLEGE.

The eighty-ninth session was formally opened on Wednesday afternoon, Oct. 3. Sir William Turner, K.C.B. Principal of the University of Edinburgh, presided, and among others present were Dr. O. Charnock Bradley, Principal of the College; Mr. C. Price, M.P.; Sir Andrew M'Donald, Emeritus Professor Chiene, C.B.; Treasurer Leishman, Col. Wardlaw Ramsay, and Mr. Robert Anderson, S.S.C., Secretary.

Principal Sir WILLIAM TURNER: We are met to-day under special circumstances, because since the end of the last session important changes have taken place in the staff of the College, and I think it right that I should say a few words in regard to those changes. In the first place Principal Dewar tendered to the Board of Management his resignation. Principal Dewar has been associated with the Veterinary College for I believe some twenty years, and for the last fifteen years he filled the important office of Principal. (Applause). The Board of Management desire to express their acknowledgment of the services which Principal Dewar rendered during this long period of office. His resignation necessarily involved the re-arrangement of the staff. As his successor the Board have appointed Prof. Bradley. (App.) Those who have been students of the College during the years Dr. Bradley has been Professor of Anatomy know well the zeal he has shown in the discharge of his duties. (App.) But the post of Professor of Anatomy in the Royal (Dick) Veterinary College seems to be a sort of standpoint from which the anatomical professor may jump into a Principalship, for it happens that the Principal of the Veterinary College in London and the Principal of the Veterinary College in Dublin were predecessors of Prof. Bradley in the Chair of Anatomy in this College. (App.) Principal Bradley has now been appointed the lecturer in the University on that branch of Comparative Anatomy which refers to the domestic animals which you have studied in this College. Prof. Gofton has been appointed Professor of Medicine, and the Chair of Surgery which he held has been given to Mr. Ainsworth Wilson, while the lectureship of Hygiene has been filled by the appointment to it of Mr. Basil Buxton.

It is clear that the veterinary profession is now called upon to take a wide grasp of questions affecting the public health—the health of man as well as the health of animals. You cannot indeed dissociate the public health of man from the public health of the animal, because there are so many infectious diseases that the animal can and does transmit to man, so that human medicine and veterinary medicine have a very close alliance and association with each other. Therefore we must now look at the veterinary profession as a profession which is not only concerned in, if I may say so, the doctoring of animals, but which has to do with disease of various kinds in its wide aspects, embracing man and animals. (Applause.) But this study cannot be properly proceeded with unless the veterinary student has for his guidance and help adequate buildings, adequate equipment, and adequate staff of teachers. This important development of the subject with which you are especially concerned has been under the consideration of the Board now for a considerable time, and the first thing that we had really to decide upon was—Is it possible to obtain in this city a site which could be adopted for the building of a College in accordance with the present needs of veterinary medicine and veterinary science? Now I am happy to say that a site has been secured and paid for. (Applause.) Unfortunately I cannot say that we have sufficient money to erect the buildings at the present time, although I must acknowledge the great assistance that we have received from public bodies in Edinburgh, such as the Corporation of the City, the Carnegie Trust, the Highland and Agricultural Society, and the Executive Committee of the recent Edinburgh Exhibition. (Applause.) We have also received valuable assistance from private friends. In the front of those friends I must name one of your own profession—Mr. MacCallum. (Applause). Not only has he shown his love for his profession by endowing a Chair in the College, but he has still further given handsomely towards the erection of the buildings of the new College. (Applause.) Another friend has been Mr. C. E. Price, M.P., who from the beginning has shown a practical interest in the prosperity of the movement. (Applause.) It remains for me to state that the College has now become a Central Institution under the important Education (Scotland) Act of 1908, and as such we have a claim on the funds that are administered by that Department. I was happy to hear this morning that the Department has recognised the claim, and has already handed over to our Secretary a very handsome cheque. (Loud applause.)

[Principal Bradley's address appears on p. 229.]

Grouse Disease.—The Report of the Committee of Enquiry.

For close on a hundred years the private records and the reports of grouse shooting have contained mention of "disease," an epidemic—if the grouse world may be called a demos—which has done enormous damage. From time to time scientists have turned their attention to the subject; but, until recently, lack of organisation and combination of effort stood in the way of really effective investigation. Towards the end of the nineteenth century two theories as to the cause of grouse disease were chiefly favoured. These were evolved by Prof. Klein and Dr. J. Spencer Cobbold respectively. It was to probe these and other theories to the full that in 1904 a number of gentlemen formed themselves into a Committee of enquiry on Grouse Disease.

The Committee issued an interim report in 1908, and now the final report has made its appearance, published by Smith, Elder, and Co., at two guineas. When the excellence of the production, the illustrations being particularly good, the magnitude of the investigation, and the provision of the terms of reference that no public money be expended on the enquiry—the cost of which to the members of the Committee and private subscribers has been something over £4300—are taken into consideration, there seems reason for surprise that the price at which it may be bought is so small as it is.

Though Prof. Klein's theory was of later date than was that of Dr. Cobbold it may be well to consider this one first. Klein examined a large number of birds, some of which had died in emaciated condition, some in apparently good; and he came to the conclusion that "the congestion of one or both lungs, the congestion of the liver, the small dark spleen, and the patchy redness of the intestine and the peritoneum," and the presence of Bacillus coli in the lung and liver of infected birds, proved the true grouse disease to be a form of acute infectious pneumonia—something such, perhaps, as the pneumonic plague which assails the beaver in the streams to the east of Lake Baikal in Western Mongolia. The Committee began by thinking that Klein's disease was a fact, and spoke of it as the "true epidemic grouse disease." And in a few isolated cases that early were brought to their notice the Committee's field observers believed that the lesions described by him, with so much detail, were present. They thereupon, for the next week or two, awaited an inundation of dead birds showing similar lesions. But no epidemic occurred, and the inundation did not happen; and it became evident by degrees that there was something doubtful about the view which had been provisionally adopted.

Later it seemed to be proved clearly that, accurate

and painstaking as Prof. Klein had been in his work and description of what he had seen, his deductions were founded on a misconception. Dr. C. G. Seligmann found in birds that were obviously dying from "grouse disease" there was no dangerous ante-mortem infection of the lung or other tissues with the Bacillus coli, and no resognisable lesion in any organ of the bird except in part of the intestine. All the appearance of congestion and pneumonia in the lung were found to be due to post-mortem change alike evident in diseased and in perfectly healthy normal birds. The point was tested by taking a number of healthy pigeons and killing the whole of them at the same time with chloroform. The birds were numbered and opened on consecutive days, and the change in the appearance of the viscera was noted. It was evident that in every case where there had been extravasation of blood or serous fluid, owing to rough handling or damage by the knife in dissecting the pigeon, the tissues of the lung became black and took upon themselves precisely the same appearance that is seen in a grouse found dead upon the moor or examined some days after being shot. The appearance of pneumonia was evidently due to the soaking of the lung-tissue in decomposing blood and serum, and the post-mortem colonisation of the tissues by B. Coli.

Cobbold's view, advanced just after the famous outbreak of 1872, was that the epidemic was entirely due to the presence in the pair of cæca—those parts of the grouse which correspond to the appendix in man—of large numbers, thousands, of small nematode worms, Trichostrongylus pergracillis; and while thinking Klein's the "true" epidemic, the Committee had no doubt that these internal parasites had been responsible for a considerable share of mortality, and the outbreak of 1907 had given them an excellent opportunity for collecting data.

Having come to the conclusion, then, that the "infectious pneumonia" theory was untenable, from 1908 onwards the following points were studied especially: (1) The life history of the Trichostrongylus pergracilis; (2) the life-history of the other internal parasites infecting the alimentary tract of grouse; (3) the protozoal parasites infecting the alimentary tract and blood of grouse; (4) the bacteriology of grouse; (5) the various insects found on the moors, both from the point of view of insect-borne disease and the view of food; and others.

It is just possible that the committee's investigators never came across the genuine "Grouse disease"; but, apart from that question, all the outbreaks of disease that have come under their notice—and some 2,000 birds were examined—can be ascribed either to strongylosis or to coccidiosis, the latter the result of the presence in the duodenum of Eimeria (Coccidium) avium—a parasite discovered during the investigations by Dr. Leiper.

Cobbold differed from Klein in one very important respect—viz., that he distinctly indicated that he did not observe any example of a grouse dying in good condition and without having lost weight.

"It is quite clear," say Dr. E. A. Wilson and Mr. A. S. Leslie in their account of the work of the committee, "that one of the most important signs of disease . . . . is loss of weight. And this loss of condition, even to emaciation, which follows on strongylosis, is a character to which full prominence is given by all writers about "Grouse Disease," though no measurement of actual weights had ever been recorded so far as was known before the present inquiry began its work. The omission to record weights is all the more to be regretted because the chief characteristic of the only other form of "Grouse Disease" which has been reported is the fact that the weight of birds that have succumbed to it remains normal.

The good condition, however, may have been so called not as the result of actual measurement but on the bird's appearance of good feather and normal weight when taken in the hand as it lay dead on the moor. "The birds were never weighed, and never carefully examined. Yet without careful weighing and examination it is impossible to come to any reasonable conclusion as to their condition or the cause of death." This has been proved time after time by the committee's field-observer, who has been present when full-feathered, richly-coloured hens, perhaps found almost warm but dead upon their nests, have been weighed in the hand and judged normal, but have been proved to be below normal by the spring balance. In the circumstances, then, the committee seem fully justified in attributing the appearance of "Grouse Disease" to Trichostrongylus pergracilis, which they have found to infest the cæca of every acknowledged diseased bird. And while it is possible that the virulent form of disease does sometimes occur, it is also possible that the belief in it is entirely without real reason.

As to the life-history of the strongyle. The worms in the grouse's cæca produce eggs, which pass out of the body with the fæces. If the conditions be moist and from cool to warm (continued drought and heat sterilise the eggs) the larvæ hatch out. About two days later the larva casts its skin and develops rapidly; and eight days from the time of leaving the grouse it is ready to make its way back into the cæca. This is accomplished by climbing up the heather stalks and getting into the top green shoots, on which the grouse feed. And experiment showed that, within fourteen days of its leaving the cæca as an egg, the strongyle is producing eggs. Since countless numbers of eggs are passed by the infected grouse each day the enormous importance of preventing overcrowding on the moor will readily be seen. Still more evident is this in view of the fact that *all* grouse are infected more or less.

How to diminish the tendency to "pack," by careful management of the heather-burning, and in other ways, is well shown in Lord Lovat's chapter on Moor Management. The maintenance of a plenteous supply of good feed, by systematic heather-burning, draining of bogs, and provision of suitable grit, should promote the health of the birds to such an extent that in the spring, the birds' critical time, they will be able to withstand the attack of the parasite.—*Westminster Gazette.*

B. Coli as a Parasite of Plants

In *Phytopathology* for June J. R. Johnston raises the question of the possibility of *Bacillus coli* being a plant parasite. This organism and its numerous varieties are very widely distributed in nature, but they are known only as harmless saprophytes and no disease in plants has ever been ascribed to them. The experiments carried out by Johnston, however, show that under suitable conditions these organims may cause considerable damage. Inoculations of a culture of *B. coli* of animal origin were made into the heart wood of cocoanut seedlings. In the course of a month or two in most cases a condition of soft rot appeared around the site of inoculation and from the lesion *B. coli* was recovered. These experiments suggest that certain conditions of rot in plants may be due to bacterial organisms and the supposition is supported by some observations made upon the naturally occurring Budrot disease of cocoanut trees in Cuba. Cultures from diseased trees were inoculated into healthy ones and reproduced the disease. Further reinoculation continued to produce the disease. On study of the organisms in these cultures a considerable number were found to be *B. coli* indistinguishable from strains of animal origin. Johnston accordingly comes to the conclusion that some variety of *B. coli* is the actual cause of Budrot disease in cocoanut trees.—*B. M. J.*

DISEASES OF ANIMALS ACTS 1894 TO 1910, SUMMARY OF RETURNS.

Period	Anthrax. Outbreaks Confirm'd	Anthrax. Outbreaks Reported	Anthrax. Animals Confirm'd	Anthrax. Animals Reported	Foot-and-Mouth Disease. Outbreaks	Foot-and-Mouth Disease. Animals.	Glanders (including Farcy) Outbreaks	Glanders (including Farcy) Animals.	Counties Affected Animals Attacked	Sheep Scab. Outbreaks	Swine Fever. Outbreaks.	Swine Fever. Slaughtered. *
GT. BRITAIN. Week ended Oct. 7	19		19		8	25	3	4		2	51	685
Corresponding week in 1910		33		35			11	21		4	24	196
Corresponding week in 1909		27		33			9	38		5	16	130
Corresponding week in 1908		15		19			8	61	London 4	2	25	224
Total for 40 weeks, 1911	667		822		17	466	155	371		313	1972	23032
Corresponding period in 1910		1114		1324	2	15	299	882		354	1114	10060
Corresponding period in 1909		1013		1343			429	1538		481	1339	12117
Corresponding period in 1908		835		1111	3	112	643	1993		649	1618	9624

Board of Agriculture and Fisheries, Oct. 10 1911.

	Parasitic Mange (outbreaks)
IRELAND. Week ended Oct. 7	4
Corresponding Week in 1910	2
Corresponding Week in 1909	...
Corresponding Week in 1908	4
Total for 40 weeks, 1911	269
Corresponding period in 1910	366
Corresponding period in 1909	309
Corresponding period in 1908	285

	Anthrax. Outbreaks Confirm'd	Anthrax. Outbreaks Reported	Anthrax. Animals Confirm'd	Anthrax. Animals Reported	Foot-and-Mouth Disease. Outbreaks	Foot-and-Mouth Disease. Animals.	Glanders (including Farcy) Outbreaks	Glanders (including Farcy) Animals.	Counties Affected Animals Attacked	Sheep Scab. Outbreaks	Swine Fever. Outbreaks.	Swine Fever. Slaughtered. *
IRELAND. Week ended Oct. 7	...	...	...	...	...	...	...	...	...	4	...	47
Corresponding Week in 1910	...	...	...	...	...	...	...	...	...	2	1	...
Corresponding Week in 1909	...	...	...	...	...	...	...	...	1	...	...	...
Corresponding Week in 1908	...	...	...	...	...	...	...	...	1	4	5	18
Total for 40 weeks, 1911	...	7	14	...	...	2	3	52		269	104	1812
Corresponding period in 1910	...	5	8	...	...	1	2	80		366	74	1708
Corresponding period in 1909	...	6	6	...	...	...	...	68		309	86	1561
Corresponding period in 1908	...	7	10	...	...	...	...	34		285	146	3265

Department of Agriculture and Technical Instruction for Ireland, (Veterinary Branch), Dublin, Oct. 9, 1911

NOTE.—The figures for the Current Year are approximate only. * As Diseased or Exposed to Infection

Quarantined Dogs at Southampton—Important Test Case.

An unusual case concerning quarantined dogs was heard at the Southampton County Bench on Friday, October 6, before Admiral C. J. Rowley, in the chair; Mr. R. A. Bayford, K.C.; Mr. H. Milner-White, LL.D.; Col. W. S. Sinkins, and Sir Alfred Swaine-Lethbridge, magistrates.

Mr. William Augustus DellaGana, F.R.C.V.S., Above Bar, Southampton, for whom Mr. G. Thatcher, London, appeared, was summoned for having 37 dogs at the Bitterne Manor Farm Kennels on August 30th last, without having in force such licenses as were required by the Statute.

Mr. F. V. Barber, Deputy Clerk to the Hants County Council, appeared in support of the information on behalf of Supt. Littlewood, and having cited the Act said the point on which the case turned was whether the defendant kept the dogs or not. He had stated that the dogs were imported into Great Britain under the Importation of Dogs Order, 1901, which was made for the purpose of stamping-out rabies. Mr. Barber contended that the defendant so long as he had control of the dogs was liable for the licenses, and the dogs were under his control for six months. No owner outside the United Kingdom could be summoned. Correspondence had passed between the defendant and the County Council, and the defendent said he was exempt from licenses, as he had charge of the dogs for the Board of Agriculture and Fisheries, but Mr. Barber contended that the Importation Order did not affect the general provision of the Act. A letter was sent from the County Council to the defendant stating that although he was liable for payment, the Council would not enforce payment, provided he produced licenses taken out in the names of the owners of the dogs.

Supt. Littlewood gave evidence as to the number of dogs on the premises, and said no licenses had been taken out. There had been considerable correspondence over the matter, and defendant was still in correspondence with the Board of Agriculture. Some of the animals were sporting dogs, and all were isolated.

Mr. Thatcher, for the defence, urged that the word "keep" in the Act did not mean "keep in custody," but that they were kept for use, and that could not be said to apply to this case. The dogs were in the defendant's control and custody, but only as a place of detention for the Board of Agriculture.

The defendant gave evidence, in the course of which he said he was authorised to keep the dogs. There was no formal license, but an official form was issued, showing the place where the dogs could be kept. This form was issued by the Board of Agriculture, and he had been supplied with one. The dogs were isolated, being kept in separate cages, and were not taken ont during the whole period they were there. His impression was that the dogs were being kept by the Government, which had power to have the dogs removed if they wished to do so. The Board provided that the dogs must be kept under control. The dogs were kept at the expense of the owners in accordance with the Order, and could be removed on any occasion when any dangerous disease, such as rabies, broke out. A most important point he wished to remark was that the Government only had power to release the dogs and no one else.

The Bench retired to consider their decision, and returned after an absence of a little over ten minutes,

when the Chairman announced that there was a considerable difference of opinion on the Bench, and they thought it advisable that a case should be taken, to have a judicial opinion as to the real meaning of the word "keep" in the section.

Mr. Barber pressed for a decision.

The Chairman said the majority of the Bench were of opinion that the defendant was clearly responsible, and they imposed a fine of 1s. and costs, allowing two guineas for the complainant's legal expenses.—*The Southern Daily Echo.*

Foot-and-Mouth Disease—The Outbreak near Bridgwater.

The existence of foot-and-mouth in the district was first detected on Thursday, September 28th, amongst a number of dairy cattle on Manor Farm, Blindman's Gate, Middlezoy, near Bridgwater, occupied by Mr. Edward Rawle. Mr. Rawle on Wednesday, September 27th, saw that his cattle were ailing, and consulted Mr. E. W. Bovett, M.R.C.V.S., of Bridgwater, who, on Thursday morning, visited the farm, and on examining the cattle formed the opinion that sixteen of the eighteen cows were suffering from foot-and-mouth disease. Supt. W. H. Williams, of the Bridgwater County Police, wired the fact of the discovery to the Board of Agriculture and Fisheries, and by Thursday night Mr. Jackson, one of the Board's veterinary surgeons, arrived in Bridgwater, and early on Friday morning confirmed Mr. Bovett's opinion. Mr. Stockman, the Board's chief veterinary inspector, arrived during Friday afternoon. He corroborated the opinion of the other veterinaries, Mr. Bovett being complimented on detecting the presence of the disease and the promptness with which he had dealt with the matter. Other officials arrived later, including Sir Edward Clarke, Assistant Permanent Secretary to the Board of Ageiculture, and Mr. Smart, Mr. Wrightson, Mr. Munro, and Mr. Mitton, and a scheme of stringent precautions was decided upon. On Saturday Taunton market was closed, and the markets at Bridgwater, Highbridge, Langport, Williton, and Yeovil are similarly affected.

Entrance to the field in which the work of slaughter and cremation was proceeding was strictly forbidden. A police officer was stationed at the gate entrance to the field night and day, and only those officially sanctioned were permitted to enter. Those engaged in the work observed most rigid precautions. To prevent the possibility of carrying the infection to other fields and places no one was allowed to pass out of the field in question without rinsing their hands in disinfectants and dipping their boots in carbolic. The wheels of carts and the hoofs of horses were disinfected, whilst even the roads in the vicinity were disinfected and limed. It is nearly forty years ago that an outbreak of the disease occurred in the Bridgwater district. Old farmers recall that in their early days the disease often ravaged whole herds of cattle in the country, causing enormous loss to agriculturists, but so severe are the precautions taken to-day that the outbreak is usually restricted to a limited area.

The district declared is a very large one, comprising the Bridgwater, Wells, Somerton, Yeovil, Crewkerne, Ilminster, Taunton, and Bishop's Lydeard Petty Sessional Divisions (with some slight exceptions), also parts of the Petty Sessional Divisions of Axbridge, Shepton Mallett, Wincanton, and Wellington, together with all the boroughs in the county, with the exception of Bath.

Speaking at a Liberal meeting at Yeovil on Saturday, Sir Edward Strachey appealed to agriculturists in the infected area and in the county generally to support the Board of Agriculture in the stringent measures they were taking to stamp out the terrible disease. He should be glad to be able to say, both as the Parliamentary Secretary to the Board of Agriculture and as a Somerset man, that the men of Somerset were loyal to the Board in that matter. (Cheers.)

The following cattle have been destroyed:—On Mr. Rawle's farm—Cattle, 77; pigs, 29. On Mr. Sharman's farm—Cattle, 12; pigs, 2. Total, 120.

In all since October 3rd there have been seven fresh cases detected, and in each instance the Board of Agriculture officials have taken prompt steps. The infected animals, and those which had been in immediate contact with them, have been slaughtered, and their carcases cremated in specially provided pits in the fields in which the stock were killed. The farmers in the district are viewing the situation with a fair amount of optimism, and are loyally obeying the restrictions which the Board of Agriculture have deemed wise to impose. The Board has a staff of nearly twenty inspectors on the scene, and that such a number is essential those familiar with the thorough manner in which the Board have dealt with the outbreaks are convinced. For instance, the officials, after great labour and patience, have traced practically the whole of the sheep and cattle which were sold at the recent St. Matthew's Fair, and have inspected the animals with a view to ascertaining whether any have developed the disease, the origin of which is developed in complete mystery. The inspectors have also made every endeavour to discover how the disease found its way amongst Mr. Rawle's stock, but up to the present no clues of a reliable nature have been disclosed.

Entrance to the fields in which the disease has been detected amongst stock is rigidly forbidden, and police are on duty day and night, and for the convenience and comfort of the officers temporary huts have been erected, and small stoves provided. The inspectors are clothed in overalls, and they and the slaughterers and labourers engaged in keeping the pit fires alight rince hands and boots in carbolic before leaving, whilst the wheels of carts on which the dead stock have been conveyed to the pits for cremation are also washed in the same disinfectant. Straw is strewn in large quantities at the entrance to each of the infected fields, and hourly this is well sprinkled with Jeyes' disinfectant. Those in the locality are loud in praise of the splendid efforts which the Board's inspectors are making to stamp out one of the worst diseases that troubles the agricultural community. Almost hourly reports of suspected cases arrive at headquarters, and inspectors are despatched by motor to investigate the case, So thoroughly alarmed have many of the farmers become that the least ailment amongst stock is construed into the existence of foot-and-mouth disease, and on several occasions rumours have been in circulation that cattle are infected, when thorough examination has revealed merely the existence of a complaint common to stock.

Owing to the prolonged drought and the consequent shortage of grass in mauy parts of the county, farmers in the late summer were everywhere seeking keep for their stock. The moors in the Sedgmoor district being lowly situated had retained their verdancy to a remarkable degree, and to its green pastures agriculturists from a long distance away had driven their herds while their own fields recovered from the effects of the scorching sun. The consequence is that the rich moors around Middlezoy, Westonzoyland, and Othery are stocked with cattle to an extent unknown for many years, and it is, unfortunately, in the heart of this vast feeding ground that the disease has broken out. Up to the present the cases that have occurred have been in a well-defined belt of country, and in all, save one instance, the infection has been traced to contact with the originally diseased cattle. The exception was the outbreak which was reported on Friday in a field situate be-

tween Othery and Aller, a distance of nearly two miles from the original outbreak. Here eight dairy cattle were found to be suffering from the disease. These animals had not been in contact with any of the originally diseased stock. The outbreak is said to be the most virulent with which the Board have had to deal for thirty years.

The veterinary inspectors of the Board of Agriculture have paid visits of Inspection to those farms visited by Mr. Bovett, on Sept. 28th, with negative results: after visiting the farm he at once returned home and thoroughly disinfected himself, his ropes, dog cart, and horse's feet before visiting other cattle.—*The Bridgwater Mercury.*

The Board of Agriculture and Fisheries has issued the following:—

No outbreak of the disease has up to the present been discovered on premises outside the two adjoining parishes of Middlezoy and Othery, near Bridgwater, but within the former parish the existence of the disease has now been confirmed amongst the stock of nine different owners, whilst one outbreak has been detected in the parish of Othery in marshes which adjoin those in the neighbouring parish in which the disease has appeared.

The outbreaks, ten in all, have occurred amongst cattle pastured in the marshes within a radius of about a mile of the village of Middlezoy, and the later outbreaks are believed to be connected directly or indirectly with the original outbreak which occurred at Manor Farm on the 29th ult.

All the cattle and sheep pastured in the fields in which the disease has appeared have been slaughtered by order of the Board, and in certain cases cattle in the adjoining pastures have also been slaughtered with a view to prevent the further spread of the disease.

Animals in the vicinity are kept under daily observation by the veterinary inspectors of the Board with a view to the early detection of any further cases of the disease.

In view of the fact that the disease has been confined to a comparatively restricted area, an Order has been made which comes into force on October 12th modifying substantially the restrictions in force in the scheduled district as regards those parts of it more remote from the outbreaks.—*The Times.*

Cruelty Charge at Eastbourne.

At the Eastbourne Borough Bench on Monday, Oct. 9th, before Mr. A. Mayhewe (in the chair), and other Magistrates, Frederick Feast, of Kilburn Terrace, was summoned for cruelty to a horse on the 16th September, and Frederick J. Tompsett, of Dudley Terrace, for aiding and abetting.

Mr. F. W. Morgan appeared on behalf on Feast.

P.C. Copping stated that he saw Feast driving a grey horse attached to a landau. The horse was going very lame and he stopped it. Witness said to Feast: "Are you aware it was stopped on 14th inst., and certified unfit for work?" The reply was "Yes." Feast refused to take the animal out of the shafts, and witness and another constable had to do this. The horse was only fit for the kennels, for it had no power in its fore legs and knocked its fetlocks together. On the following morning witness went to the stables and saw Tompsett, who said, "The horse has nothing to do with me. I sold it to Feast on Friday."

P.S. North also described the condition of the animal, which he thought was aged and in poor condition.

P.C. Reader Grey gave similar evidence, adding that he saw Tompsett on 16th September, and was told, "It has not been worked with my knowledge."

Inspector Bennett, R.S.P.C.A., deposed that upon examining the animal on 17th September he found that it had no muscular control at all over its fore legs. Tompsett told him: "I sold the horse to Feast on Friday night, and he can do what he likes for it. I have got a receipt for it." Feast admitted to him that the horse was lame, adding, "What am I to do; I've got to get a living." Tompsett said that he still let the horse stop in his stable and looked after it. He also lent Feast the landau. Feast told witness that he gave Tompsett £12 for the animal, but in the Inspector's opinion it was not worth a quarter of that amount.

Evidence was also given by David Arnold, blacksmith, of Longstone Road, and John William Bannister, blacksmith, of Leslie Street. The latter said that Tompsett paid him for shoeing the horse.

Defence.

Feast, on oath, said he was "born with horses" and had had experience of them all his life. Regarding the horse in question, he said he bought the animal from Tompsett on September 15th on the advice of Mr. Wallis, veterinary surgeon, who valued it at between £12 and £15. It was not lame, and was quite fit for work with the exception of a corn.

By the Chairman: He had been in Tompsett's employ about a year. He borrowed the money from Tompsett to pay for the shoeing.

Mr. J. E. Wallis, veterinary surgeon, of Hailsham, deposed that he examined the horse on 15th September, and was told that it "ought to be shot" according to the police. But he only found a corn on each foot. He told defendants how to have it shod so as to make it go sound. Witness totally disagreed with the evidence of the inspector and police officers, and could not understand why the horse was stopped a second time. The only trouble was "corns due to bad shoeing." Witness again saw the horse on 18th September, and it was still going sound.

Mr. P. Perkins, veterinary surgeon, of Hastings, stated that he had examined the horse that morning. It was not lame nor in poor condition, and it was quite fit for work. There could not have been any wasting of the muscles of the legs.

By the Chairman: Witness would accept the opinion of a policeman as to the lameness of the horse in one leg, but not as to both fore legs.

The Bench inspected the horse, and then found the cases proved.

There was a further summons against Tompsett for cruelty to the horse on 14th September.

The evidence was to the effect that defendant was driving the horse attached to a landau, and it was in the condition that had been described. Tompsett told P.C. Copping that the horse had "knocked himself."

Tompsett was given an excellent character covering a period of 24 years, and Inspector Bennett told the Bench that he was "led away by the smoothing tongue of the man Feast."

Feast: Hear, hear!

The Bench fined Feast 15s. inclusive, and Tompsett 10s. and 5s. inclusive.—*Sussex Daily News.*

Case of Identity

A case relating to the ownership of a foal and presenting unusual features has just been heard at Bangor County Court. The plaintiff, William Pritchard, a cattle dealer, and the defendant, Hugh Roberts, both had pony mares which grazed on the mountain and were due to foal about the same time. When their owners visited the mountain to ascertain the condition of the ponies they found that both had foaled. Both mares were suckling one foal, and a dead foal was found in a river close by. A question arose as to the ownership of the foal, and the plaintiff sued the defendant for the value of the foal, £3 10s., with £1 by way of damages.

It was suggested by the plaintiff that the foal should remain with the two mares for some months, by which time it would be able to recognise its true mother; if it did not it should then be sold and the mony divided, but the defendant declined. The defendant also declined to allow two independent men to decide the ownership. The plaintiff said that the defendant removed the mare and foal from the mountain to a farm, and when the plaintiff took his mare near the farm the animal neighed and the foal came up to the gate and tried to suck it, while the defendant's mare did not stir from the bottom of the field. The defendant said he pulled the dead foal out of the river and plaintiff's mare went up to it and licked it, whilst his own mare took no notice of it. The Judge thought the defendant had acted unwisely, especially in view of the dispute pending, in taking the foal from the mountain. He awarded the plaintiff £3 10s. the value of the foal, with 10s. damages.—*The Times.*

"The Senses" in Surgery.

The art and craft of surgery in some respects has not progressed during the last century as markedly as the science of surgery; for we find, for example, few novelties and still fewer improvements in the manipulative surgery of the face and extremities.

Human knowledge has its limits, and unless we can prove that man's brains grow larger as the world around him becomes more highly developed, our advance now simply means that we rely more on extraneous aid than in the greater perfecting of men's individual powers. Conversely, it is quite possible that mere mechanical development may have the opposite effect, and the brains shrink as they become less necessary.

In the practice of the art of surgery, as well as in that of medicine, I have often been struck by the clear diagnosis which those who possess a good ear for music often make where others have failed for want of it. Others having mechanical gifts will improvise an apparatus, while another man is wondering how soon he will be able to get an appliance from an instrument maker. In the matter of drawing, again, one who has a good eye for it will usually make a neater, if not a better, operator than the man who has not; his lines will be more accurate, and the ends of his incisions will meet at the proper point, and his whole work will be more perfect. So, again, with the sense of touch; this requires a long education, but some never seem to acquire any delicacy of touch—their fingers are "all thumbs," and often they will endeavour to discover by force what can only be made out by the utmost gentleness in manipulation. For example, a movable kidney or other easily displaced tumour can often be made out only by a "surprise touch," and escapes at once from observation with any rough handling. A keen sense of touch is invaluable to the surgeon; a gynæcologist especially is very much dependent upon it for success.—[From an address by W. D. Spanton, F.R.S.E.] *B. M. J.*

The Transmission of Cretinism.

Dr. Lemierre, in the *Gazette des Hôspitaux*, reports the conclusions arrived at from the studies of Von Aichbergen on the transmission of cretinism from man to animals. This author has for many years made a study of cretinism in Styria, and is convinced that the affection must be ranked among the infectious diseases. He had the opportunity of observing two dogs brought up by a female "demicretin," who made them sleep in her own bed. In course of time the dogs developed cretinous characteristics. Badly developed, they presented voluminous goîtres, their coats were dull, dry, and lanuginous, and they retained their milk teeth. They were unable to bark and appeared devoid of all intelligence. The author next entrusted this woman with a young dog obtained from an absolutely healthy litter, without hereditary pathological taint. The young animal took up the same style of living as the two others removed from the house. Three months later it also had a goître, but was still lively and able to bark. Ten months later the goître had become enormous, the animal was apathetic and incapable of barking. Its coat had lost its gloss, and its milk teeth remained. In short, it presented the appearance of a cretin. On the other hand, a dog of larger breed entrusted to the woman and brought up in the same room as its companion, but without sleeping in the same bed, developed on normal lines. The author thinks that these facts demonstrate that the transmission of cretinism from man to animals is possible.—*The Hospital.*

The Vitality of Ascaris Ova.

Dr. R. S. Morris, writes on this subject in the *Johns Hopkins Hospital Bulletin.* In the clinical laboratory of that hospital are preserved jars containing a thin suspension of fæcal material and parasitic ova. The dilution with formalin and water is so arranged that there is present 2 per cent. of the antiseptic. This strength was believed to be lethal to the ova of every parasite affecting human beings, and Dr. Morris's experience shows that this is true of all except *Ascaris lumbricoides.* In January, 1909, when demonstrating from one of these jars, he was astonished to find that many of the eggs contained actively motile embryos. How long the specimen had been on the laboratory shelf is unknown, but the embryos were still motile in May of this year—that is, twenty-nine months after they were first noticed to be alive. In December, 1909, the author had an opportunity to test the accuracy of his observation, as a patient was admitted whose fæces swarmed with the ova of *Ascaris.* A specimen was put up in 2 per cent. formalin, securely sealed in a jar of brown glass, and left on the laboratory shelf. Twice in 1910 search was made for motile embryos without result, but in January, 1911, a few were found, and in May another examination showed an apparent increase of the number.

Personal.

Mr. WILLIAM SHIPLEY, F.R.C.V.S., of Yarmouth, who has succeeded Mr. W. Freeman Barrett as Hon. Secretary of the Victoria Veterinary Benevolent Fund, has been successful in aiding this excellent institution by means which might with advantage to the Fund be emulated in other places. Mr. Shipley arranged a bowling tournament in which he interested a number of his friends, one of whom, Mr. D. E. Aldred, kindly presented a silver cup for competition. Twenty-six players took part on Thursday, Sept. 28, and the result of the tourney was that Mr. Ernest B. Blake, J.P., won the cup. The players were entertained to tea by Mr. and Mrs. Shipley. From the sale of the tickets, and subscriptions obtained through the tournament, the sum of £8 7s. 6d. was put to the credit of the Victoria Veterinary Benevolent Fund.

OBITUARY.

ROBERT LEES, M.R.C.V.S., Lagg, Ayr.
Graduated, 1862, Edin: 1880.

Mr. Lees died on Thursday, 28th ult. Aged 68 years.

EDWARD BAILEY, M.R.C.V.S., Leicester, Vet.-Maj. Leicestershire Yeomanry Cavalry. Lond: April, 1859.

Death occurred on Oct. 5th, from bronchitis, at the age of 73 years.